

The Cary Arboretum



of The New York Botanical Garden

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Travels of the Orient

by Thomas S. Elias



This "Garden of Pebbles" at the Daisen-In Temple is a most splendid example of dry-landscape gardening in Japan.

The snow-covered mountains of central Alaska glistening in the early morning sunlight seemed to extend endlessly when viewed from 50,000 feet above the earth's surface. This delightful surprise came in the seventh of my thirteen-hour, nonstop flight from New York to Japan. Leaving Kennedy Airport, we arched northward over Canada, Alaska and down along the Aleutian Island chain to the Narita airport near Tokyo. I spent the latter half of October and early November working with the plant collections housed at the universities in Tokyo, Kyoto and Sapporo before traveling on to Beijing, China for another eight days.

In Tokyo, I met Dr. Tetsuo Koyama, my botanical colleague from the New York Botanical Garden in the Bronx, who had graciously made arrangements for my travels and work in Japan. The object of this visit was to further my studies of the trees and forests of the Soviet Union and to learn about the trees of northern Japan and their relationship to North American species. The Japanese once occupied many of the islands north of the present boundaries of Japan. These islands, Sakhalin and the Kuril chain, are now under the control of the U.S.S.R. and are not open to American scientists. It is difficult even for Soviet botanists to work on these islands.

Botanically, they are important because many trees and shrubs native to Japan, China or Korea extend just into the U.S.S.R. in the southern part of the far eastern region of the Soviet Union. Also, Japanese botanists conducted extensive studies of these islands from the late 1800's to 1943. Thus, there are as many or perhaps even more specimens in Japanese institutions from these islands than can be found in Moscow or Leningrad.

I was apprehensive when I first arrived in Japan; my head was full of stories of the hordes of people rushing everywhere, overcrowding, shoving, using a language which was impossible for me to read and difficult to speak. But from the time I entered the airport at Narita, I encountered one pleasant experience after another. The airport terminal and transit systems were clean and efficient, and everyone I came into contact with, from customs officials to the baggage handlers on the bus, was polite and most helpful.

Despite its size, in Tokyo it is quite safe to walk the streets in the evening. An intricate maze of subway systems, also immaculate, facilitates quick access to most parts of the city. In the evenings, I would seek out small

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Special Members' Trip to Philly

Special Members' Trip to the
Philadelphia Flower Show, Longwood
Gardens and Winterthur
March 9, 10, and 11, 1982

Expanding upon last year's successful tour to Boston's Arnold Arboretum and its annual flower show, this year a three-day excursion to Philadelphia and Kennett Square is planned, with accommodations at the Philadelphia Hilton Hotel and the Longwood Inn.

The trip will include the Philadelphia Flower Show, a cocktail party hosted by Director Willard Payne and Mrs. Payne, followed the next day by visits to "Phillips Mushroom Place," the Brandywine River Museum (a restored century-old gristmill displaying an outstanding collection of paintings by the Wyeth family and many others), and a tour of Longwood Gardens led by Horticulturist Robert Hebb. On the third day a visit to Winterthur, featuring the famous du Pont house-museum, will precede the return to Millbrook.

The cost for this three-day excursion is \$148.50 per person double occupancy (single person supplement, \$27.00). This includes transportation, hotel accommodations, all tour and show admissions, hospitality hour, gratuities, and a \$25 tax deductible contribution to the Cary Arboretum. NO MEALS are included.

We shall be ready to take your reservations beginning January 15, 1982. For further details, contact:
Mrs. Janice Claiborne (677-5343)
Cary Arboretum, Box AB
Millbrook, New York 12545
All reservations are on a first come, first served basis (limited singles available) and must be made by February 12.

Dr. Karnosky Named to Consortium Post



Dr. Karnosky

Dr. David F. Karnosky, Forest Geneticist for the Cary Arboretum, has been named Executive Secretary of the Consortium for Environmental Forestry Studies.

Dr. Karnosky, who succeeds Dr. Lee Herrington, will administer consortium programs under an Intergovernmental Personnel Act agreement with the U.S.D.A. Forest Service's Northeastern Forest Experimental Station. The Consortium

consists of 12 northeastern universities and the Forest Service. Through grants to individual universities, the Forest Service funds community and environmental forestry research projects, which are coordinated by the consortium. More than 200 papers and six major publications have been produced by consortium members over the past ten years in an effort to improve the quality of life in the northeast.

At the Cary Arboretum, Dr. Karnosky's work has included research to develop a disease-resistant elm, research on the effects of air pollution on forest trees, and examination of stress on trees in the urban environment. He is also an associate professor at Marist College in Poughkeepsie, New York, and at the State University of New York (SUNY) College of Environmental Science and Forestry.

As Executive Secretary of the Consortium for Environmental Forestry Studies, Dr. Karnosky will oversee the coordination of continued research in such areas as tree breeding, insect and disease control, air quality, urban microclimate, and forest planning and management.

A June meeting of the Consortium will be held at the New York Botanical Garden Cary Arboretum.

At The Garden

The winter show is in full bloom at the glorious Enid A. Haupt Conservatory at the New York Botanical Garden in the Bronx where petunias, begonias, cyclamens and kalanchoes are among the flowering plants on display through January 31.

The Conservatory will be closed February 1-11 in preparation of the Garden's daffodil show which opens February 12 and will feature beautiful spring flowers including tulips, azalias, hyacinths — and of course — hundreds of daffodils. This show continues through March 21.

Wednesday has been declared "free day" at the Enid A. Haupt Conservatory, where the usual \$2.50 admission fee has been waived each Wednesday for individuals. Members of the Arboretum are always admitted free to the Conservatory, and those who visit the Bronx on Wednesdays are encouraged to introduce a friend to the Garden — for free! The Conservatory is open Tuesday through Sunday, 10 a.m. to 5 p.m.

Travels Of The Orient

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restaurants specializing in different aspects of traditional Japanese cuisine. One night it was eel, another tempura, or noodles, or sukiyaki and many others. Among the many highlights of my trip were the small fruit and vegetable stands neatly tucked between shops or homes. Here I sampled the oriental persimmon, large figs, apples as large as grapefruits, and fascinating pears shaped like and resembling a golden delicious apple. These sweet juicy pears became a regular after-dinner snack.

The herbarium (dried plant collection) of the University of Tokyo is in two locations: the conifers, ferns and related plants are housed at the Botanical Garden in one part of the city, while the flowering plants are on campus in the biology building. Sorting through and studying the old plant specimens was interesting and informative. It was necessary, however, for me to learn the Japanese characters for Sakhalien and the Kuril Islands.

The most convenient means of travel from Tokyo to Kyoto is by the express bullet train, so named because of the bullet-shaped nose of the lead locomotive and the speed at which it travels, about 180 miles per hour. In Kyoto, I was met by Dr. Hiroshige Koyama, a plant taxonomist at the University of Kyoto. Throughout the next seven days, I examined thousands of specimens, searching for important type specimens on which a species is based or for materials from the regions I was studying. Many of these specimens will be shipped to me on loan for detailed examination. One Sunday was spent visiting different shrines and Buddhist temples complete with the classic Zen gardens. It was like stepping back several hundred years in time.

One of the delights of my visit to Kyoto was the opportunity to spend two evenings in a Japanese home. My room had the panelled sliding doors, rice straw mats for flooring, and a futon or bedding laid out each evening on the mats. This, coupled with a Japanese style bath, truly made me feel I was in another culture, something modern hotels do not do!

After completing my initial work in Kyoto, I flew to Sapporo on the northern island of Hokkaido. Unlike Kyoto, which was at the peak of its fall foliage color season, the trees of Hokkaido had largely shed their leaves and a winter atmosphere was evident. The University of Hokkaido has an attractive campus, the largest in Japan. Professor Koji Ito of the Graduate School of Environmental Science went to extraordinary lengths to make my visit productive and enjoyable.

The University of Hokkaido has the most extensive collections from the island north of Japan as the result of the exhaustive studies of three generations of botanists. These scientists have assembled an exceedingly valuable resource which is not duplicated anywhere else in the world. I was given complete access to these collections, and in the few days I gathered as much data as I could and selected plant specimens to be sent back to New York on loan for further study.

Northern Japan is noticeably different from the central and southern regions. Elaborate wood carvings, different styles of architecture, and the presence of salmon and large crabs were among the conspicuous elements. One afternoon, I gave a two-hour seminar about my work in the Soviet Union to the graduate students and staff of the

environmental science division. This was followed by an informal meeting with the graduate students with discussion of my own work and their research projects.

This initial trip to Japan was more productive than I had expected. There were far more plant specimens and publications than I imagined. Without access to this material, it would be impossible for me to complete my work on the trees of the U.S.S.R.

Late one evening, I flew from Tokyo to Beijing, China where I was met by Professor Wang Fu-hsiung, head of the laboratory of phytomorphology at the Botanical Institute. The first item of business at the Institute was to discuss the cooperative research program that Mrs. Sun An-ci would be carrying out upon her arrival at the Cary Arboretum in early 1982. Mrs. Sun and I will be jointly investigating the morphology and anatomy of several Asian groups of plants while she is learning the latest research techniques and acquainting herself with scientific equipment and instruments that have been developed in the last 10 years.

Professor Wang and I worked out a proposed cooperative research program that would be conducted jointly between our laboratories. This program will make botanically interesting or rare Chinese plants available to us for study and will help to bring the Chinese botanists up-to-date with the western countries in the plant sciences.

While at the Institute, I gave two lectures about my research and had the opportunity to meet with many Chinese botanists to

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Hundreds Came to See the Trees

The trees that were brought in from the cold to be on display in the lobby of the Arboretum's Plant Science Building were the topic of much conversation, the subjects of hundreds of photographs, and an inspiration to those who saw them during an exhibit of natural ornaments for the Christmas season.



Fist-sized bunches of cracked corn and sunflower seeds, corn cobs coated with lard and birdseed, grapefruit and orange shells filled with peanut butter, and sumac sprays were the ingredients used by the Cary Arboretum Girl Scouts to decorate a 15 foot hemlock tree for birds outside the Plant Science Building.

Trees, varying from a two-foot bonsai Scots pine decorated with sea shells, to a nine-foot balsam fir embellished with corn husk flowers, were decorated by garden clubs and individuals. Other trees and ornaments in the exhibit included a live fifteen-foot hemlock outside the Plant Science Building decorated by the Cary Arboretum Girl Scouts with food for birds; a four-foot white spruce decorated with citrus fruits; a three-foot dwarf Alberta spruce embellished with different plant materials combined to form ornaments or characters, including a teasel and winter-berry mouse, a tiny manger in a milk pod, and birds' nests made out of straw and straw berries.

Area garden clubs from Pine Plains, Stanford, Poughkeepsie, and Millbrook, as well as the Nine Partners and Dutchess County Infirmary Garden Club and several individuals participated in this display of creativity and sensitivity to nature. Some of the groups had been preparing for the exhibit since last April.

Mrs. June Payne and Arboretum Horticulturist Bob Hebb, who together coordinated the exhibit, have proposed a similar display for the 1982 holiday season.

Hunters Give the "Thumbs Up" Sign to Cary

As part of the Arboretum's deer management program, the sixth annual herd reduction has ended with a thumbs up signal from the hunters, indicating a successful hunt and a goal met by the Wildlife Department.

The formal herd reduction, under the direction of Coordinator of Wildlife Resources Jay McAninch, is only one part of the complete deer management program which includes research and testing of deer repellents and deterrents. The program originates from a desire to protect an enlarging group of plant specimens used for education and research.

Since 1,500 acres of Arboretum property are studied ecologically, and an additional 500 acres are devoted to formal planting and testing areas, deer damage from browsing is always a potential problem. With the aid of fencing and repellents, researchers have controlled the areas where the resident deer browse, and an attempt is made each year, by reducing the herd, to balance the number of deer with the native forage available to them.

Organized hunts on the Arboretum grounds began in 1976 and have involved many hunters, their total cooperation, and an understanding of the Arboretum's philosophy.

In the program, a selection process involves removing older aged deer, who require more forage each winter, and especially the older females, potential bearers of twins or triplets. As a result, the productivity of resident deer at the Cary Arboretum has dropped, and the herd is healthy, as they have access to the proper amount of forage required during the winter. The elevated physical condition of the herd has been documented by several measures taken from harvested deer each fall.

Statistics show that a managed hunt also benefits the hunters. In 1970, 243 hunters, 26% of whom were successful, took part in

a public hunt on the Arboretum grounds. With the organization of the supervised herd reduction in 1976, 56% of the 90 participants were successful.

Beginning each August, applications are accepted for hunting on the Arboretum grounds. Preference is given to applicants with hunting experience, involvement with the Cary Arboretum as a "Friend" or volunteer, and familiarity with the Arboretum grounds. This past season, applications from throughout Dutchess County were screened to form a hunting group of 53.

In order to gain acceptance to the program, potential hunters must attend a pre-hunt seminar, during which the Arboretum's deer management program is discussed to fine-tune hunters to the expectations and goals of the program. All participants are required to have applied for a New York State doe permit. Final acceptance is determined by a shooting proficiency test.

During the hunt, participants are required to sign in and out at the Arboretum's Wildlife Lab, wear Cary insignia, display Arboretum permits in automobiles, and park in specific areas distributed throughout the grounds.

Hunters cooperate with the Arboretum staff by bringing deer to a wildlife check station where body weight, age and condition of the deer are determined and noted. Many volunteers assist Jay McAninch, Arboretum Coordinator of Wildlife Resources, and Ray Winchcombe, Research Assistant, throughout the three-week hunt. The 53 participants involved in this past season's herd reduction harvested a total take of 82 — a 155% success rate for hunters.

"A controlled management approach has proven to be an effective tool," reports Jay McAninch, "and after six years of controlled herd reductions and management studies, we feel this technique can be effective in other situations."

People at the Arboretum

Bill Newkirk, Carpenter . . . Like many on the Arboretum staff, Bill's specialty is working with trees, and his talents are evident throughout the buildings on the Arboretum grounds in the form of cabinets, shelves and various "made to order" items.

A resident of Amenia for 41 years, Bill recently celebrated his 25th wedding anniversary with his wife, Sigrid, whom he met in an Amenia department store.

His background includes an assignment in the Navy during World War II as a fire controlman on a destroyer.

Bill began work at the Arboretum in 1975. One especially gratifying job recently completed was extensive renovation of the Armond Lovelace house, now the home of Arboretum Horticulturist Bob Hebb and his family.

In his spare time, Bill enjoys "tinkering"

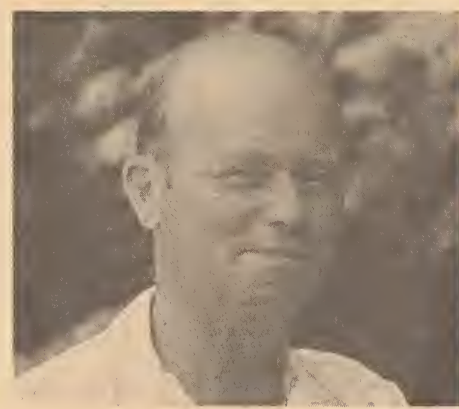


Photo by Robin Place

Bill Newkirk

with his 1930 Model-A Ford, and is a "weekend detective" seeking-out jewelry and Indian head pennies with his metal detector.

Regarding the Arboretum, Bill enjoys the environment and the staff he works with. "We get the job done," he says, "and we work well together doing it."

Around the Arboretum

Annual Appeal Underway

Mrs. Marta Greene of Millbrook is leading the Arboretum's fourth Annual Appeal to members, supporters, and friends of the Arboretum.

"To all of us," she says, "the Arboretum is a place to learn to live." "Each year, the Arboretum must receive nearly an additional half million dollars in order to keep its doors open and its public programs available to us."

According to Arboretum Director Dr. Willard Payne, "This year the operations costs exceed institutional resources by approximately \$300,000. Two thirds of this are in sight, but it is vital that we meet the entire requirement. Every dollar raised through appeal goes directly to the programs of the Arboretum."

Contributions should be sent marked "Annual Appeal."

Cary Facilities Available To Groups

Youth groups, school groups and other organizations are invited to use the facilities of the Cary Arboretum, including meeting rooms and outdoor areas, for reasonable fees.

Modest fees are charged to offset the costs of preparation and clean-up for meetings. Maximum indoors seating capacity is one hundred people.

To reserve meeting space for your group or organization, please contact Mrs. Janice Claiborne, (914) 677-5343.

Students Receive Master's Degrees

Master's degrees were recently presented to three students who have worked within the Arboretum's research departments on various projects.

Ms. Dawn Lange, a student at the College of Environmental Science and Forestry, SUNY at Syracuse, has been granted a Master's degree in forest genetics. Since the summer of 1976, Dawn has worked closely with Arboretum forest geneticist Dr. David Karnosky in efforts to hybridize the American elm with the disease-resistant Siberian elm. Her work has concentrated on a protoplast fusion process, which is the first step to achieving that goal. Ms. Lange intends to continue her research at the Arboretum as she works toward a Ph.D. in forest genetics.

Mr. Ralph Pagano, who recently received a Master's Degree from SUNY Binghamton, spent two years under supervision of the Arboretum's Wildlife Department researching the ecological relationships between pine and meadow voles in orchard habitats. This research has generated much interest by Ulster County apple growers, whose orchards suffer millions of dollars a year in vole damage.

Mr. Bill Hyatt, a University of Connecticut student, prepared his Master's Thesis on "The Ecological Evolution of the East Branch of the Wappingers Creek on The Cary Arboretum with Special Emphasis on the Brown Trout." Mr. Hyatt has been recently employed by the State of Connecticut. His research at the Arboretum was supervised by Coordinator of Wildlife Resources Jay McAninch.

Travels of the Orient

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discuss my work and become familiar with their current research. The staff of the Botanical Institute is very hard working and dedicated but are struggling with little modern scientific equipment and older buildings not suited for research laboratories. Fortunately, a large, new complex for the herbarium and some laboratories are being constructed north-west of Beijing on the grounds of the Botanical Gardens. When completed, my botanical colleagues will have suitable space to carry out their work.

Now back in Millbrook, I am eagerly awaiting the arrival of the plant specimens from Japan and China. This material will provide critical data in my long-term objective of accomplishing what no one else has — provide a manual of the trees native to the U.S.S.R. in the English language!



Happy New Year!

from the
Staff at The
Cary Arboretum

THE CARY ARBORETUM
of
THE NEW YORK
BOTANICAL GARDEN

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